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10/777,715	02/12/2004	Dwip N. Banerjee	AUS920040013US1	5927
46/073 7590 12/08/2008 IBM CORPORATION (VE) C/O VOLEL EMILE P. O. BOX 162485 AUSTIN, TX 78716				
EXAMINER WILSON, ROBERT W				
ART UNIT		PAPER NUMBER		
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12/08/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/777,715

Applicant(s)

BANERJEE ET AL.

Examiner

ROBERT W. WILSON

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-946)
- 3) ☐ Information Disclosure Statement(s) (PTO/SE/US)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. In view of the appeal filed on 9/29/08, PROSECUTION IS HEREBY REOPENED. The finality of the previous rejection has been withdrawn and a new final rejection has been provided. The rule for responding are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

/JAYANTI K PATEL/

Supervisory Patent Examiner, Art Unit 2419

Claim Rejections - 35 USC § 103

2 The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are

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such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vangal (U.S.

Patent Pub. No.: US2004/0125751) in view of Galyas (U.S. Patent No.: 6,577,620)

Referring to claim 1, Vangal teaches: a method (Figure 1 performs the method) of aggregating N Transport Control Protocol-offloaded adapter of a first communication system (Figure 1 is a first communication system comprising engines A to N or TCP offloaded adapters) to augment network data transaction bandwidth of the first communication system by a factor of N (increase processing for NxC connections which inherently increases bandwidth by a factor of N per Pg 2 Para [0027]) N being an integer (N refers to the number of engines which is an integer), the method comprising:

Aggregating the N TCP-offloaded adapters by assigning a common Internet Protocol address to the N TCP offloaded adapters (Figure 1 shows a system which has an inherent single IP address which can add an appropriate number of N engines or adapters so the N engines and the Controller have a common IP address per Pg 2 Para [0027] to Para [0035])

Selecting one of the N aggregated TCP-offloaded adapter through which a connection between the first and second communication system is to originate (Figure 1 shows the selection of the N engines or TCP offloaded adapters which make up a first communication system which is connect via bus to inherent second system per Pg 2 Para [0027] to Para [0035] and Fig 4 shows the connection determination per Pg 3 Para [0039] to Para [0040])

Originating the connection using the selected TCP-offloaded adapter the connection for transacting data over a network between the first and second communication system (Fig 4 shows the connection determination between Figure 1 or first communication system and inherent second communication system which is connected via TCP/IP to the bus)

Transacting data through a computing device to the network associated with the selected TCP-offload adapter (Fig 1 shows transacting TCP/IP or data through the Controller or computing device with the selected Engine or offload adapter)

Vangal does not expressly call for: assembling data from the N adapters for channeling the data

Galyas teaches: assembling data from the N adapters for channeling the data (MUX assembles portion of data from N GRUs or adapter in order to channelize data into TCP packets per col. 3 line 16 to col. 4 line 43)

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the assembling data from the N adapters for channeling the data of Galyas to the controller of Vangal in order to combine the processing associated with each of the engines.

In addition Vangal teaches:

Regarding claim 2, wherein selecting one of the N aggregated TCP-offload adapters (n-aggregated engines 100a-100n, refer to Figure 1 and Paragraphs [0027] to Para [0028]) through which a connection between the first and second communication system ("off-load" engine can perform network protocol operations for one or more hosts, i.e. "communication system" refer to Para [0024]) is to originate is based on a local port and a remote port the local port and remote port being the ports through which the data transaction is to occur (source and destination ports per Fig 4 and 5 respectively and per Para [0038] to Para [0046])

Regarding claim 3, wherein selecting one of the N aggregated TCP-offload adapters (n-aggregated engines 100a-100n, refer to Figure 1 and Paragraphs [0027] to Para [0028]) through which a connection between the first and second communication system is to originate ("off-load" engine can perform network protocol operations for one or more hosts, i.e. "communication system" refer to Para [0024] source and destination ports per Fig 4 and 5 respectively and per Para [0038] to Para [0046]) includes the step or assigning a local port through which the connection is to occur if a local port was not yet assigned (IF a connection has not yet between assigned a local port also has not yet be assigned. The local port is associated with the engine and get assigned along with the engine per Fig 1)

Regarding claim 4, wherein the assigned local port is ephemeral port (The applicant does not define ephemeral port in the claim language the office interprets the port associated with the engine which is assigned is an ephemeral port per Fig 1)

Regarding claim 5, wherein the data includes incoming and outgoing data, the incoming data being divided into data packets, each packet having associated therewith a local port and remote port selecting a TCP-offloaded adapter through which to be channeled (an input sequencer/buffer 162 that parses a received packet's header refer to Figures 5 and 7 and Paragraphs [0045], [0046], [0059] Each engine has a local and remote port per Fig 1)

Referring to claim 6, A first embodiment of Vangal teaches: a method (Figure 1 performs the method) of aggregating N Transport Control Protocol-offloaded adapter of a first communication system (Figure 1 is a first communication system comprising engines A to N or TCP offloaded adapters) to augment network data transaction bandwidth of the first communication system by a factor of N (increase processing for NxN connections which inherently increases bandwidth by a factor of N per Pg 2 Para [0027]) N being an integer (N refers to the number of engines which is an integer), the method comprising:

Aggregating the N TCP-offloaded adapters by assigning a common Internet Protocol address to the N TCP offloaded adapters (Figure 1 shows a system which has an inherent single IP address which can add an appropriate number of N engines or adapters so the N engines and the Controller have a common IP address per Pg 2 Para [0027] to Para [0035])

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Selecting one of the N aggregated TCP-offloaded adapter through which a connection between the first and second communication system is to originate (Figure 1 shows the selection of the N engines or TCP offloaded adapters which make up a first communication system which is connect via bus to inherent second system per Pg 2 Para [0027] to Para [0035] and Fig 4 shows the connection determination per Pg 3 Para [0039] to Para [0040]

Originating the connection using the selected TCP-offloaded adapter the connection for transacting data over a network between the first and second communication system (Fig 4 shows the connection determination between Figure 1 or first communication system and inherent second communication system which is connected via TCP/IP to the bus)

Transacting data through a computing device to the network associated with the selected TCP-offload adapter (Fig 1 shows transacting TCP/IP or data through the Controller or computing device with the selected Engine or offload adapter)

The first embodiment of Vangal does not expressly call for: computer program stored on a readable medium which is executable on a processor as well as being broken into code steps or assembling data from the N adapters for channeling the data

The second embodiment of Vangal teaches: computer program (microcode instructions or program per Fig 8 and per Para[0060] to [0067] which is stored on 172 per Fig 5 or readable medium which is executed on 170 per Fig 5 or processor)

It would have been obvious to add computer program stored on a readable medium which is executable on a processor as well as being broken into code steps of the second embodiment of Vangal to the method of Vangal because a method requires a program to be executed on a readable meidum in order to perform a method.

The first and second embodiment of Vangal does not expressly call for: assembling data from the N adapters for channeling the data

Galyas teaches: assembling data from the N adapters for channeling the data (MUX assembles portion of data from N GRUs or adapter in order to channelize data into TCP packets per col. 3 line 16 to col. 4 line 43)

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the assembling data from the N adapters for channeling the data of Galyas to the controller of of the first and second embodiment Vangal in order to combine the processing associated with each of the engines.

In addition Vangal teaches:

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Regarding claim 7, wherein the selecting code means includes code means for using a local port and a remote port to select the TCP-offloaded, the local port and remote port being the port through which the data transaction is to occur (IF a connection has not yet been assigned a local port also has not yet been assigned. The local port is associated with the engine and gets assigned along with the engine per Fig 1 and Fig 4)

Regarding claim 8 herein the selecting code means includes code means for assigning a local port through which the connection is to occur if a local port was not yet associated (IF a connection has not yet been assigned a local port also has not yet been assigned. The local port is associated with the engine and gets assigned along with the engine per Fig 1 and Fig 4)

Regarding claim 9, wherein the assigned local port is ephemeral port (The applicant does not define ephemeral port in the claim language the office interprets the port associated with the engine which is assigned is an ephemeral port per Fig 1)

Regarding claim 10, wherein the data includes incoming and outgoing data, the incoming data being divided into data packets, each packet having associated therewith a local port and remote port selecting a TCP-offloaded adapter through which to be channeled (an input sequencer/buffer 162 that parses a received packet's header refer to Figures 5 and 7 and Paragraphs [0045], [0046], [0059] Each engine has a local and remote port per Fig 1)

Referring to claim 11, Vangal teaches: a apparatus (Figure 1) of aggregating N Transport Control Protocol-offloaded adapter of a first communication system (Figure 1 is a first communication system comprising engines A to N or TCP offloaded adapters) to augment network data transaction bandwidth of the first communication system by a factor of N (increase processing for NxC connections which inherently increases bandwidth by a factor of N per Pg 2 Para [0027]) N being an integer (N refers to the number of engines which is an integer), the method comprising:

Means for aggregating the N TCP-offloaded adapters by assigning a common Internet Protocol address to the N TCP offloaded adapters (Processor 170 per Fig 5 provides the means for aggregating in the controller. Figure 1 shows a system which has the controller which has an inherent single IP address which can add an appropriate number of N engines or adapters so the N engines and the Controller have a common IP address per Pg 2 Para [0027] to Para [0035])

Means for selecting one of the N aggregated TCP-offloaded adapter through which a connection between the first and second communication system is to originate (Processor 170 per Fig 5 provides the means for selecting in the controller. Figure 1 shows the selection of one of N engines or TCP offloaded adapters which make up a first communication system which is connected via bus to inherent second system per Pg 2 Para [0027] to Para [0035] and Fig 4 shows the connection selecting per Pg 3 Para [0039] to Para [0040])

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Means for originating the connection using the selected TCP-offloaded adapter the connection for transacting data over a network between the first and second communication system (The processor 170 per Fig 5 provides the means for originating a connection. Fig 4 shows the connection determination between Figure 1 or first communication system and inherent second communication system which is connected via TCP/IP to the bus)

Means for Transacting data through a computing device to the network associated with the selected TCP-offload adapter (The processor 170 per Fig 5 provides the means for transacting data through the controller or computing device. Fig 1 shows transacting TCP/IP or data through the Controller or computing device with the selected Engine or offload adapter)

Vangal does not expressly call for: assembling data from the N adapters for channeling the data

Galyas teaches: assembling data from the N adapters for channeling the data (MUX assembles portion of data from N GRUs or adapter in order to channelize data into TCP packets per col. 3 line 16 to col. 4 line 43)

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the assembling data from the N adapters for channeling the data of Galyas to the controller of Vangal in order to combine the processing associated with each of the engines.

In addition Vangal teaches:

Regarding claim 12, wherein the selecting means includes means for using a local port and a remote port to select the TCP-offloaded, the local port and remote port being the port through which the data transaction is to occur (IF a connection has not yet been assigned a local port also has not yet been assigned. The local port is associated with the engine and get assigned along with the engine per Fig 1 and Fig 4)

Regarding claim13, herein the selecting means includes means for assigning a local port through which the connection to occur if a local port was not yet associated (IF a connection has not yet between assigned a local port also has not yet been assigned. The local port is associated with the engine and get assigned along with the engine per Fig 1 and Fig 4)

Regarding claim 14, wherein the assigned local port is ephemeral port (The applicant does not define ephemeral port in the claim language the office interprets the port associated with the engine which is assigned is an ephemeral port per Fig 1)

Regarding claim 15, wherein the data includes incoming and outgoing data, the incoming data being divided into data packets, each packet having associated therewith a local port and remote port selecting a TCP-offloaded adapter through which to be channeled (an input sequencer/buffer 162 that parses a received packet's header refer to Figures 5 and 7 and Paragraphs [0045], [0046], [0059] Each engine has a local and remote port per Fig 1)

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Referring to claim 16, Vangal teaches: a system (Figure 1 is the system) of aggregating N Transport Control Protocol-offloaded adapter of a first communication system (Figure 1 is a first communication system comprising engines A to N or TCP offloaded adapters) to augment network data transaction bandwidth of the first communication system by a factor of N (increase processing for NxN connections which inherently increases bandwidth by a factor of N per Pg 2 Para [0027]) N being an integer (N refers to the number of engines which is an integer), the system comprising:

At least one storage device for storing code data (172 per Fig 5 is ROM or RAM which stores instructions or code)

At least one processor for processing the code data (170 or processor for processing protocol instructions (172) or code per Fig 5) to aggregate the N TCP-offloaded adapters by assigning a common Internet Protocol address to the N TCP offloaded adapters (Figure 1 shows a system which has an inherent single IP address which can add an appropriate number of N engines or adapters so the N engines and the Controller have a common IP address per Pg 2 Para [0027] to Para [0035]), to select one of N aggregated TCP-offloaded adapter through which a connection between the system and remote communication system is to originate (Figure 1 shows the selection of the N engines or TCP offloaded adapters which make up a communication system which is connect via bus to inherent remote communication system per Pg 2 Para [0027] to Para [0035] and Fig 4 shows the connection determination per Pg 3 Para [0039] to Para [0040];

The connection for transacting data over a network between the system and the remote communication system (Fig 4 shows the connection determination between Figure 1 or the system and inherent remote communication system which is connected via TCP/IP to the bus) and to transact data through a computing device to the network associated with the selected TCP-offload adapter (Fig 1 shows transacting TCP/IP or data through the Controller or computing device with the selected Engine or offload adapter)

Vangal does not expressly call for: assembling data from the N adapters for channeling the data

Galyas teaches: assembling data from the N adapters for channeling the data (MUX assembles portion of data from N GRUs or adapter in order to channelize data into TCP packets per col. 3 line 16 to col. 4 line 43)

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the assembling data from the N adapters for channeling the data of Galyas to the controller of Vangal in order to combine the processing associated with each of the engines.

In addition Vangal teaches:

Regarding claim 17, wherein the processing the code data to select one of the TCP-offloaded adapter includes processing the code data to use a local port and a remote port select the TC-offloaded to use the local port and the remote port through which the data transaction occurs

(When a connection is assigned a new engine with local port and remote port is assigned which data transaction occurs per Fig 1 and Fig 4)

Regarding claim 18, wherein the code data to select one of the TC _-offloaded adapter includes processing the code data to assign a local port through which the connection is to occur if a local port was not yet assigned (IF a connection has not yet been assigned a local port also has not yet been assigned. The local port is associated with the engine and gets assigned along with the engine per Fig 1 and Fig 4)

Regarding claim 19, wherein the assigned local port is ephemeral port (The applicant does not define ephemeral port in the claim language the office interprets the port associated with the engine which is assigned is an ephemeral port per Fig 1)

Regarding claim 20, wherein the data includes incoming and outgoing data, the incoming data being divided into data packets, each packet having associated therewith a local port and remote port selecting a TCP-offloaded adapter through which to be channeled (an input sequencer/buffer 162 that parses a received packet's header refer to Figures 5 and 7 and Paragraphs [0045], [0046], [0059] Each engine has a local and remote port per Fig 1)

Response to Amendment

4. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT W. WILSON whose telephone number is (571)272-3075. The examiner can normally be reached on M-F (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on 571/272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Robert W Wilson/
Primary Examiner, Art Unit 2419

RWW